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RAW SEQUENCE LISTING

DATE: 08/30/2004

PATENT APPLICATION: US/10/764,799

TIME: 14:39:17

Input Set : N:\Crf3\RULE60\10764799.raw.txt

Output Set: N:\CRF4\08302004\J764799.raw

1 <110> APPLICANT: Szostak, Jack W.
 2 Roberts, Richard W.
 3 Liu, Rihe
 4 <120> TITLE OF INVENTION: SELECTION OF PROTEINS USING RNA-PROTEIN
 5 FUSIONS
 6 <130> FILE REFERENCE: 00786/350005
 7 <140> CURRENT APPLICATION NUMBER: US/10/764,799
 C--> 8 <141> CURRENT FILING DATE: 2004-01-26
 9 <150> PRIOR APPLICATION NUMBER: US/09/247,190
 10 <151> PRIOR FILING DATE: 1999-02-09
 11 <150> PRIOR APPLICATION NUMBER: 60/035,963
 12 <151> PRIOR FILING DATE: 1997-01-21
 13 <150> PRIOR APPLICATION NUMBER: 60/064,491
 14 <151> PRIOR FILING DATE: 1997-11-06
 15 <150> PRIOR APPLICATION NUMBER: 09/007,005
 16 <151> PRIOR FILING DATE: 1998-01-14
 17 <160> NUMBER OF SEQ ID NOS: 38
 18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 76
 22 <212> TYPE: RNA
 23 <213> ORGANISM: Artificial Sequence
 24 <220> FEATURE:
 25 <223> OTHER INFORMATION: Translation template
 26 <400> SEQUENCE: 1
 27 gggaggacga aauggaacag aaacugaucu cugaagaaga ccugaacaaa aaaaaaaaaa 60
 28 aaaaaaaaaa aaaacc 76
 30 <210> SEQ ID NO: 2
 31 <211> LENGTH: 10
 32 <212> TYPE: PRT
 33 <213> ORGANISM: Homo sapiens
 34 <400> SEQUENCE: 2
 35 Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
 36 1 5 10
 38 <210> SEQ ID NO: 3
 39 <211> LENGTH: 153
 40 <212> TYPE: RNA
 41 <213> ORGANISM: Artificial Sequence
 42 <220> FEATURE:
 43 <223> OTHER INFORMATION: Translation template
 44 <400> SEQUENCE: 3
 45 gggacaaaua cuauuuacaa uuacaauggc ugaagaacag aaacugaucu cugaagaaga 60
 46 ccugcugcgu aaacgucgug aacagcugaa acacaaacug gaacagcugc guaacucuuu 120

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```

47      cgcuaaaaaa aaaaaaaaaa aaaaaaaaaa acc                                153
49 <210> SEQ ID NO: 4
50 <211> LENGTH: 34
51 <212> TYPE: PRT
52 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: Random peptide
55 <220> FEATURE:
56 <221> NAME/KEY: VARIANT
57 <222> LOCATION: (1)...(27)
58 <223> OTHER INFORMATION: Xaa is any amino acid.
59 <220> FEATURE:
60 <221> NAME/KEY: VARIANT
61 <222> LOCATION: (1)...(34)
62 <223> OTHER INFORMATION: Xaa = Any Amino Acid
63 <400> SEQUENCE: 4
W--> 64      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65           1             5             10             15
W--> 66      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln Leu Arg Asn Ser
67           20             25             30
68      Cys Ala
70 <210> SEQ ID NO: 5
71 <211> LENGTH: 25
72 <212> TYPE: RNA
73 <213> ORGANISM: Tobacco Mosaic Virus
74 <400> SEQUENCE: 5
75      gggacaauua cuauuuacaa uuaca                                25
77 <210> SEQ ID NO: 6
78 <211> LENGTH: 10
79 <212> TYPE: RNA
80 <213> ORGANISM: Escherichia coli
81 <400> SEQUENCE: 6
82      ggaggacgaa                                10
84 <210> SEQ ID NO: 7
85 <211> LENGTH: 34
86 <212> TYPE: PRT
87 <213> ORGANISM: Homo sapiens
88 <400> SEQUENCE: 7
89      Met Ala Glu Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Leu Arg Lys
90           1             5             10             15
91      Arg Arg Glu Gln Lys Leu Lys His Lys Leu Glu Gln Leu Arg Asn Ser
92           20             25             30
93      Cys Ala
95 <210> SEQ ID NO: 8
96 <211> LENGTH: 29
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
99 <220> FEATURE:
100 <223> OTHER INFORMATION: Translation template

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```

101 <400> SEQUENCE: 8
102      aaaaaaaaaa aaaaaaaaaa aaaaaaaccc      29
104 <210> SEQ ID NO: 9
105 <211> LENGTH: 12
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Translation template
110 <400> SEQUENCE: 9
111      aaaaaaaaaa cc      12
113 <210> SEQ ID NO: 10
114 <211> LENGTH: 24
115 <212> TYPE: DNA
116 <213> ORGANISM: Artificial Sequence
117 <220> FEATURE:
118 <223> OTHER INFORMATION: Translation template
119 <400> SEQUENCE: 10
120      cgcgggttttt attttttttt ttcc      24
122 <210> SEQ ID NO: 11
123 <211> LENGTH: 42
124 <212> TYPE: RNA
125 <213> ORGANISM: Artificial Sequence
126 <220> FEATURE:
127 <223> OTHER INFORMATION: Translation template
128 <400> SEQUENCE: 11
129      ggaggacgaa augaaaaaaaa aaaaaaaaaa aadaaaaaaaaa cc      42
131 <210> SEQ ID NO: 12
132 <211> LENGTH: 42
133 <212> TYPE: RNA
134 <213> ORGANISM: Artificial Sequence
135 <220> FEATURE:
136 <223> OTHER INFORMATION: Translation template
137 <400> SEQUENCE: 12
138      ggaggacgaa cugaaaaaaaa aaaaaaaaaa aaaaaaaaaa cc      42
140 <210> SEQ ID NO: 13
141 <211> LENGTH: 42
142 <212> TYPE: RNA
143 <213> ORGANISM: Artificial Sequence
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Translation template
146 <400> SEQUENCE: 13
147      ggaggacgaa augaaaaaaaa aaaaaaaaaa aaaaaaaaaa cc      42
149 <210> SEQ ID NO: 14
150 <211> LENGTH: 36
151 <212> TYPE: RNA
152 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Translation template
155 <400> SEQUENCE: 14

```

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156      ggaggacgaa cugaaaaaaaa aaaaaaaaaa aaaacc      36
158 <210> SEQ ID NO: 15
159 <211> LENGTH: 33
160 <212> TYPE: RNA
161 <213> ORGANISM: Artificial Sequence
162 <220> FEATURE:
163 <223> OTHER INFORMATION: Translation template
164 <400> SEQUENCE: 15
165      ggaggacgaa cugaaaaaaaa aaaaaaaaaa acc      33
167 <210> SEQ ID NO: 16
168 <211> LENGTH: 30
169 <212> TYPE: RNA
170 <213> ORGANISM: Artificial Sequence
171 <220> FEATURE:
172 <223> OTHER INFORMATION: Translation template
173 <400> SEQUENCE: 16
174      ggaggacgaa cugaaaaaaaa aaaaaaaacc      30
176 <210> SEQ ID NO: 17
177 <211> LENGTH: 159
178 <212> TYPE: RNA
179 <213> ORGANISM: Artificial Sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: Translation template
182 <220> FEATURE:
183 <221> NAME/KEY: misc_feature
184 <222> LOCATION: (1)...(289)
185 <223> OTHER INFORMATION: n = A,T,C or G
186 <400> SEQUENCE: 17
W--> 187      gggacaauua cuauuuacaa uuacaauynn snnnsnnns nsnnnsnnnsn nsnnnsnnnsn      60
W--> 188      snnnsnnns nsnnnsnnns nsnnnsnnns snnnsnnns nsnnnsnnsc agcugcguaa      120
189      cucuugcgcu aaaaaaaaaa aaaaaaaaaa aaaaaaacc      159
191 <210> SEQ ID NO: 18
192 <211> LENGTH: 64
193 <212> TYPE: DNA
194 <213> ORGANISM: Homo sapiens
195 <400> SEQUENCE: 18
196      gttcaggtct tcttgagaga tcagtttctg ttccatttcg tctccctat agtgagtcgt      60
197      atta      64
199 <210> SEQ ID NO: 19
200 <211> LENGTH: 18
201 <212> TYPE: DNA
202 <213> ORGANISM: Homo sapiens
203 <400> SEQUENCE: 19
204      taatacgact cactatag      18
206 <210> SEQ ID NO: 20
207 <211> LENGTH: 12
208 <212> TYPE: PRT
209 <213> ORGANISM: Homo sapiens
210 <400> SEQUENCE: 20

```

RAW SEQUENCE LISTING

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```

211      Met Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
212      1                      5                      10
214 <210> SEQ ID NO: 21
215 <211> LENGTH: 99
216 <212> TYPE: DNA
217 <213> ORGANISM: Homo sapiens
218 <400> SEQUENCE: 21
219      agcgcaagag ttacgcagct gttccagttt gtgtttcagc tgttcacgac gtttacgcag      60
220      caggctcttct tcagagatca gtttctgttc ttcagccat      99
222 <210> SEQ ID NO: 22
223 <211> LENGTH: 21
224 <212> TYPE: DNA
225 <213> ORGANISM: Homo sapiens
226 <400> SEQUENCE: 22
227      agcgcaagag ttacgcagct g      21
229 <210> SEQ ID NO: 23
230 <211> LENGTH: 63
231 <212> TYPE: DNA
232 <213> ORGANISM: Homo sapiens
233 <400> SEQUENCE: 23
234      taatacgact cactataggg acaattacta ttacaatta caatggctga agaacagaaa      60
235      ctg      63
237 <210> SEQ ID NO: 24
238 <211> LENGTH: 33
239 <212> TYPE: PRT
240 <213> ORGANISM: Homo sapiens
241 <400> SEQUENCE: 24
242      Met Ala Glu Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Leu Arg Lys
243      1                      5                      10                      15
244      Arg Arg Glu Gln Leu Lys His Lys Leu Glu Gln Leu Arg Asn Ser Cys
245      20                      25                      30
246      Ala
248 <210> SEQ ID NO: 25
249 <211> LENGTH: 127
250 <212> TYPE: DNA
251 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Primers for RNA pool
254 <223> OTHER INFORMATION: n = a, t, c, or g. s = g or c.
Y--> 255 <400> 25
Y--> 256      ccctgttaat gataaatgtt aatgttacnn snnnsnnns nnsnnnsnns nsnnnsnnns      60
Y--> 257      snnnsnnns nnsnnnsnns nsnnnsnnns snnnsnnns nnsnsgtcg acgcattgag      120
258      ataccga      127
260 <210> SEQ ID NO: 26
261 <211> LENGTH: 42
262 <212> TYPE: DNA
263 <213> ORGANISM: Artificial Sequence
264 <220> FEATURE:
265 <223> OTHER INFORMATION: Primers for RNA pool

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/764,799

DATE: 08/30/2004
TIME: 14:39:18

Input Set : N:\Crf3\RULE60\10764799.raw.txt
Output Set: N:\CRF4\08302004\J764799.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22
Seq#:4; Xaa Pos. 23,24,25,26,27
Seq#:17; N Pos. 29,30,32,33,35,36,38,39,41,42,44,45,47,48,50,51,53,54,56,57
Seq#:17; N Pos. 59,60,62,63,65,66,68,69,71,72,74,75,77,78,80,81,83,84,86,87
Seq#:17; N Pos. 89,90,92,93,95,96,98,99,101,102,104,105,107,108
Seq#:25; N Pos. 29,30,32,33,35,36,38,39,41,42,44,45,47,48,50,51,53,54,56,57
Seq#:25; N Pos. 59,60,62,63,65,66,68,69,71,72,74,75,77,78,80,81,83,84,86,87
Seq#:25; N Pos. 89,90,92,93,95,96,98,99,101,102,104,105
Seq#:33; N Pos. 11
Seq#:34; N Pos. 23,24,26,27,29,30,32,33,35,36,38,39,41,42,44,45,47,48,50,51
Seq#:34; N Pos. 53,54,56,57,59,60,62,63,65,66,68,69,71,72,74,75,77,78,80,81
Seq#:34; N Pos. 83,84,86,87,89,90,92,93,95,96,98,99,101,102
Seq#:37; N Pos. 11
Seq#:38; Xaa Pos. 1,2,3,8,9,10

VARIABLE LOCATION SUMMARY

DATE: 08/30/2004

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Input Set : N:\Crf3\RULE60\10764799.raw.txt

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Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:4; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22

Seq#:4; Xaa Pos. 23,24,25,26,27

Seq#:17; N Pos. 29,30,32,33,35,36,38,39,41,42,44,45,47,48,50,51,53,54,56,57

Seq#:17; N Pos. 59,60,62,63,65,66,68,69,71,72,74,75,77,78,80,81,83,84,86,87

Seq#:17; N Pos. 89,90,92,93,95,96,98,99,101,102,104,105,107,108

Seq#:25; N Pos. 29,30,32,33,35,36,38,39,41,42,44,45,47,48,50,51,53,54,56,57

Seq#:25; N Pos. 59,60,62,63,65,66,68,69,71,72,74,75,77,78,80,81,83,84,86,87

Seq#:25; N Pos. 89,90,92,93,95,96,98,99,101,102,104,105

Seq#:33; N Pos. 11

Seq#:34; N Pos. 23,24,26,27,29,30,32,33,35,36,38,39,41,42,44,45,47,48,50,51

Seq#:34; N Pos. 53,54,56,57,59,60,62,63,65,66,68,69,71,72,74,75,77,78,80,81

Seq#:34; N Pos. 83,84,86,87,89,90,92,93,95,96,98,99,101,102

Seq#:37; N Pos. 11

Seq#:38; Xaa Pos. 1,2,3,8,9,10

VERIFICATION SUMMARY

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Input Set : N:\Crf3\RULE60\10764799.raw.txt

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L:8 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:64 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:66 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:16
L:187 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:60
L:255 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:25
L:256 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:25
L:256 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:25
L:256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:60
L:326 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:33
L:327 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:33
L:327 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:33
L:327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0
L:336 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:34
L:336 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:34
L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:60
L:362 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:37
L:363 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:37
L:363 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:37
L:363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:373 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:38
L:374 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:38
L:374 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:38
L:374 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0